REMARKS

Applicants thank the Examiner for her comments in the Non-Final Office Action dated October 22, 2007.

(A) STATUS OF THE APPLICATION

(I) DISPOSITION OF CLAIMS

(i) Claims 11, 12, 16, and 19-21 are pending in the application.

(ii) Claims 1-10, 13-15, and 17-18 were previously canceled.

(iii) Claims 11, 12, 16, and 19-21 have been rejected under 35 U.S.C. § 112, 2nd ¶.

(iv) Claims 11, 12, 16, and 19-21 have been rejected under 35 U.S.C. § 103(a).

(II) APPLICANTS' ACTION

(i) Applicants respond to the rejection under 35 U.S.C. § 112, 2nd ¶, and § 103(a) for Claims 11, 12, 16, and 19-21.

(ii) Applicants have also shown the "canceled" status of Claims 13-15, and 17, which Applicants had inadvertently omitted in the previous response.

(iii) Applicants have amended to minor typographical errors in Claims 11 and 12 that do not relate to the substance of the claims. Applicants did not add any new matter.

(B) RESPONSE TO REJECTION OVER UNDER 35 U.S.C. § 112, 2ND¶

According to the Examiner, Claims 11, 12, 16, and 19-21 are indefinite under 35 U.S.C. § 112, 2nd paragraph, because Claim 11 and 12 implicate the term "(cyclo)aliphatic polyol," but in the originally filed Specification on Page 3, only non-cyclic polyols are listed. The Examiner also provides the specific line cites, that is Lines 1-13, which, according to the Examiner, fail to show the (cyclo)aliphatic polyols of Claims 11 and 12.

In response, Applicants disagree that said cite in the Specification fails to mention such (cyclo) aliphatic polyols. Applicants state that said cite in the Specification, in fact, does list cycloaliphatic diols as well as aliphatic diols. Applicants reproduce the cited lines from Page 3 of the Specification below:

(L1) Examples of (cyclo)aliphatic diols as hydroxyl components (a1)
(L2) for the composition of the polyester (a) include ethylene glycol, 1,2-
(L3) propylene glycol and 1,3-propylene glycol, butane-1,3-diol, butane-1,4-diol
(L4) and butane-2,3-diol, pentane-1,5-diol, hexane-1,6-diol, trimethylhexane diol,
(L5) diethylene glycol, triethylene glycol, **hydrogenated bisphenols, 1,4-**
(L6) **cyclohexane dimethanol,** neopentyl glycol, butylethylpropane diol. Hexane-
(L7) 1,6-diol, neopentyl glycol, butylethylpropane diol are preferred.
(L8) Examples of (cyclo)aliphatic polyols having 3 to 6 hydroxyl groups as
(L9) hydroxyl components (a1) for the composition of the polyester polyol (a)
(L10) include glycerol, trimethylolpropane, trimethylolethane, pentaerythritol,
(L11) dipentaerythritol, ditrimethylolpropane, sorbitol, mannitol. Glycerol,
(L12) trimethylolpropane, and pentaerythritol are preferred, particularly
(L13) trimethylolpropane, and pentaerythritol. (Emphasis added).

Applicants draw the Examiner's attention to Lines 5 and 6 (L5 & L6 as listed on the left side of the indented text) above. Hydrogenated bisphenols are cycloaliphatic structures. Similarly, cyclohexane dimethanol is a cycloaliphatic structure. Therefore, both cycloaliphatic structures and aliphatic structures are listed in the subject invention's Specification.

Applicants respectfully submit that the Examiner withdraw the indefiniteness rejection under 35 U.S.C. § 112, 2nd Paragraph.

(C) RESPONSE TO REJECTION UNDER 35 U.S.C. § 103(A)

The Examiner has rejected Claims 11, 12, 16, and 19-21 as obvious over U.S. Patent No. 6,063,448 to Duecoffre, *et al.* (*hereinafter* "Duecoffre"), under 35 U.S.C. 103(a).

Applicants previously amended the claims in regard to the polyester (a) component to a polyester consisting of "at least one cycloaliphatic polyol having 3 to 6 hydroxyl groups" and "at least one dicarboxylic acid". Applicants' polyester (a) has a high hydroxyl functionality from 4.5 to 10.

Applicants also previously amended Claims 11 and 12 for the (b) component of Applicants' composition such that it is directed to components that are clearly outside of the hybrid polymers taught by Duecoffre. Applicants have previously pointed out that Duecoffre's hybrid polymers are different from a simple physical mixture of a (meth)acrylic copolymer and polyester polyol of Applicants' invention. Duecoffre's clear coat contains a hybrid binder comprising polyester polyol as one part, and the (meth)acrylic copolymer as the second part and a polyester which as pointed out above is not the polyester (a) of the composition used in Applicants' process.

Duecoffre prepared its (meth)acrylic copolymer portion by free-radically polymerizing in presence of hydroxy-functional polyesters to give a hybrid polymeric system. In contrast, the binder of the present invention is a simple physical mixture of the components. The degree of entanglement of the two different polymer chains is greater in the hybrid polymer system (Duecoffre) and the polymers may be covalently bonded in comparison to the simple physical mixture of two polymers (of the present invention).

Thus, Duecoffre does not disclose all elements of Claims 11 and 12.

Furthermore, Duecoffre's polyesters are ordinarily known polyesters. The polyesters claimed in the present invention with the specific combination of limitations cannot be found in Duecoffre. A hypothetical person skilled in pertinent art, desirous of developing polyester-based clear coat with the advantageous properties described in the present application, would not look into Duecoffre as closest prior art. Nevertheless, if the skilled person were to do so, he/she would not find any suggestion or combination in Duecoffre's disclosure describing the limitations claimed in the present invention. If such person were to look at polyesters described in Duecoffre's Examples in order to find the best mode polyesters, such polyesters, however, would teach in a different quantitative range from our specifically limited polyesters.

(1) "UNEXPECTED RESULTS" ANALYSIS

Further, Applicants call the Examiner's attention to Example 1, in particular Table 1 of the subject invention's Specification (see page 10). In fact, because the Examiner stated in the Office Action that the subject invention's disclosure does not provide the "unexpected results," and because Applicants believe that the disclosure does provide the "unexpected results, Applicants actually reproduce Table 1, followed by a discussion.

Clear coats						
Test No. and Properties	1	2	3	4	5	6
100 parts by wt. base	Base I	Base I	Base I	Base II	Base II	Base II
50 parts by wt. cross-linker solution	1	2	3	1	2	3
Mar resistance	60	58	25	80	62	40
Tree resin	37	38	45	45	53	56
Pancreatin	35	35	43	39	46	50
Sulfuric acid, 1%	40	40	49	44	50	50
Sulfuric acid, droplet test, 36%, 65°C	7/23	9/25	11/28	8/no etching	10/no etching	14/no etching
FAM test	4-5	4-5	4	0-1	0	0

(I) COMPOSITIONS 1, 2, AND 3—POLYESTER POLYOL (A) NOT PRESENT

Applicants prepared six clear coating compositions, as shown in Table 1 above. Test Compositions 1, 2, and 3, shown above, used only a polyester polyol (b), which is outside of the scope of Claims 11 and 12. Applicants note that Compositions 1, 2, and 3 were prepared using Base I. Base I ingredients are given in the undesignated Table on Page 8 of the Specification. From Row 2, is clear that Base I DOES NOT HAVE polyester polyol (a).

To arrive at the actual Compositions 1, 2, and 3, Base I was combined with Hardener Solutions 1, 2, and 3, respectively. The description of Hardener Solutions 1, 2, and 3 is given on Page 9 of the Specification, Lines 1-9.

(II) COMPOSITIONS 4, 5, AND 6—POLYESTER POLYOL (A) PRESENT

On the other hand, Compositions 4, 5, and 6, shown above, used a combination of polyesters within the scope of the Claims 11 and 12. Applicants note that Compositions 4, 5, and 6 were prepared using Base II. Base II ingredients are given in the undesignated Table on Page 8 of the Specification. From Row 2, it is clear that Base II DOES HAVE 30% polyester polyol (a).

To arrive at the actual Compositions 4, 5, and 6, Base II was combined with Hardener Solutions 1, 2, and 3, respectively. The description of Hardener Solutions 1, 2, and 3 is given on Page 9 of the Specification, Lines 1-9.

Therefore, Composition 4, with polyester polyol (a), is directly compared with Composition 1 that is without polyester polyol (a). Composition 5, with polyester polyol (a), is directly compared with Composition 2 that is without polyester polyol (a). Composition 6, with polyester polyol (a), is directly compared with Composition 3 that is without polyester polyol (a). The physical properties of Compositions 4-6 were in all cases significantly superior to Compositions 1-3.

(III) PHYSICAL PROPERTIES ANALYSIS

(1) Mar Resistance

The mar resistance of Composition 1 is at 60. On the other hand, the mar resistance of Composition 4 is 80. This is a 33% improvement.

The mar resistance of Composition 2 is at 58. On the other hand, the mar resistance of Composition 5 is 62. This is a 7% improvement.

The mar resistance of Composition 3 is at 25. On the other hand, the mar resistance of Composition 6 is 40. This is a 60% improvement.

(2) Tree Resin Resistance

The tree resin resistance of Composition 1 is at 37. On the other hand, the tree resin resistance of Composition 4 is 45. This is a 22% improvement.

The tree resin resistance of Composition 2 is at 38. On the other hand, the tree resin resistance of Composition 5 is 53. This is a 39% improvement.

The tree resin resistance of Composition 3 is at 45. On the other hand, the tree resin resistance of Composition 6 is 56. This is a 24% improvement.

(3) Pancreatin Resistance

The pancreatin resistance of Composition 1 is at 35. On the other hand, the pancreatin resistance of Composition 4 is 39. This is a 11% improvement.

The pancreatin resistance of Composition 2 is at 35. On the other hand, the pancreatin resistance of Composition 5 is 46. This is a 31% improvement.

The pancreatin resistance of Composition 3 is at 43. On the other hand, the pancreatin resistance of Composition 6 is 50. This is a 16% improvement.

(4) Sulfuric Acid 1% Resistance

The sulfuric acid 1% resistance of Composition 1 is at 40. On the other hand, the sulfuric acid 1% resistance of Composition 4 is 44. This is a 10% improvement.

The sulfuric acid 1% resistance of Composition 2 is at 40. On the other hand, the sulfuric acid 1% resistance of Composition 5 is 50. This is a 25% improvement.

The sulfuric acid 1% resistance of Composition 3 is at 49. On the other hand, the sulfuric acid 1% resistance of Composition 6 is 50. This is a 2% improvement.

(5) Sulfuric Acid 36% Droplet Resistance

The sulfuric acid 36% droplet resistance of Composition 1 at 7 minutes and etching number of 23. On the other hand, the sulfuric acid 36% droplet resistance of Composition 4 even at 8 minutes shows NO ETCHING.

The sulfuric acid 36% droplet resistance of Composition 2 at 9 minutes and etching number of 25. On the other hand, the sulfuric acid 36% droplet resistance of Composition 5 even at 10 minutes shows NO ETCHING.

The sulfuric acid 36% droplet resistance of Composition 3 at 11 minutes and etching number of 28. On the other hand, the sulfuric acid 36% droplet resistance of Composition 6 even at 14 minutes shows NO ETCHING.

(6) The FAM Analysis

The FAM analysis of Composition 1 showed complete softening at 4-5 on a scale of 0-5. On the other hand, the FAM of Composition 4 shows NO SWELLING OR SOFTENING at 0 on a scale of 0-5.

The FAM analysis of Composition 2 showed complete softening at 4-5 on a scale of 0-5. On the other hand, the FAM of Composition 5 shows NO SWELLING OR SOFTENING at 0 on a scale of 0-5.

The FAM analysis of Composition 3 showed complete softening at 4 on a scale of 0-5. On the other hand, the FAM of Composition 6 shows NO SWELLING OR SOFTENING at 0 on a scale of 0-5.

From the above analysis, it is clear that for every physical properties test, the compositions of present invention show double-digit percentage improvements and/or significant, and therefore unexpected improvements, over the comparative coatings made from base (I). Not only that, for every concentration range that was tested, the coating compositions of the present invention were always and in most instances, significantly better than the comparative coatings.

Applicants state that not only the *prima facie* case for obviousness is not established, but even if it were established the unexpected results of the present invention rebut such a presumption of obviousness.

In light of the above analysis, Applicants submit that the 35 U.S.C. § 103(a) based rejection of obviousness of pending Claims 11, 12, 16, and 19-21 should be withdrawn.

CONCLUSION

In view of the above remarks, Applicants respectfully submit that they properly traversed, accommodated, or rendered moot, the stated grounds of rejection and that they have made a complete response to the Non-Final Office Action dated September 10, 2007.

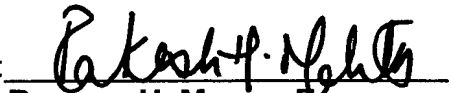
Therefore, Applicants believe that the application stands in condition for allowance with withdrawal of all grounds of rejection and respectfully solicit a Notice of Allowance.

If the Examiner has questions regarding the application or the contents of this response, Applicant invites the Examiner to contact the undersigned.

Please charge any unaccounted fee that may be due, to Deposit Account No. 04-1928 (E. I. du Pont de Nemours & Co.).

RESPECTFULLY SUBMITTED,

DATE: DECEMBER 7, 2007

BY: 

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